```
HHH         HHH  LLL              DDDDDDDDDDDD
HHH         HHH  LLL              DDDDDDDDDDDDD
HHH         HHH  LLL              DDDDDDDDDDDDD
HHH         HHH  LLL              DDD         DDD
HHH         HHH  LLL              DDD         DDD
HHH         HHH  LLL              DDD         DDD
HHH         HHH  LLL              DDD         DDD
HHH         HHH  LLL              DDD         DDD
HHH         HHH  LLL              DDD         DDD
HHHHHHHHHHHHHHHH  LLL              DDD         DDD
HHHHHHHHHHHHHHHH  LLL              DDD         DDD
HHHHHHHHHHHHHHHH  LLL              DDD         DDD
HHH         HHH  LLL              DDD         DDD
HHH         HHH  LLL              DDD         DDD
HHH         HHH  LLL              DDD         DDD
HHH         HHH  LLL              DDD         DDD
HHH         HHH  LLL              DDD         DDD
HHH         HHH  LLL              DDD         DDD
HHH         HHH  LLLLLLLLLLLLLLL  DDDDDDDDDDDD
HHH         HHH  LLLLLLLLLLLLLLL  DDDDDDDDDDDD
HHH         HHH  LLLLLLLLLLLLLLL  DDDDDDDDDDDD
```

FILEID**HLDDATA

```
HH      HH  LL          DDDDDDDD    DDDDDDDD      AAAAAA    TTTTTTTTTT    AAAAAA
HH      HH  LL          DDDDDDDD    DDDDDDDD      AAAAAA    TTTTTTTTTT    AAAAAA
HH      HH  LL          DD      DD  DD      DD  AA      AA      TT      AA      AA
HH      HH  LL          DD      DD  DD      DD  AA      AA      TT      AA      AA
HH      HH  LL          DD      DD  DD      DD  AA      AA      TT      AA      AA
HH      HH  LL          DD      DD  DD      DD  AA      AA      TT      AA      AA
HHHHHHHHHH  LL          DD      DD  DD      DD  AA      AA      TT      AA      AA
HHHHHHHHHH  LL          DD      DD  DD      DD  AA      AA      TT      AA      AA
HH      HH  LL          DD      DD  DD      DD  AAAAAAAAAA      TT      AAAAAAAAAA
HH      HH  LL          DD      DD  DD      DD  AAAAAAAAAA      TT      AAAAAAAAAA
HH      HH  LL          DD      DD  DD      DD  AA      AA      TT      AA      AA      ....
HH      HH  LL          DD      DD  DD      DD  AA      AA      TT      AA      AA      ....
HH      HH  LLLLLLLLLL  DDDDDDDD    DDDDDDDD    AA      AA      TT      AA      AA      ....
HH      HH  LLLLLLLLLL  DDDDDDDD    DDDDDDDD    AA      AA      TT      AA      AA      ....

LL              IIIIII      SSSSSSSS
LL              IIIIII      SSSSSSSS
LL                II      SS
LL                II      SS
LL                II      SS
LL                II      SS
LL                II        SSSSSS
LL                II        SSSSSS
LL                II              SS
LL                II              SS
LL                II              SS
LL                II              SS
LLLLLLLLLL      IIIIII    SSSSSSSS
LLLLLLLLLL      IIIIII    SSSSSSSS
```

```
0000     1          .TITLE  HLDDATA - HLD DATA STORAGE
0000     2          .IDENT  'V04-000'
0000     3
0000     4  ;
0000     5  ;*****************************************************************************
0000     6  ;*                                                                           *
0000     7  ;*  COPYRIGHT (c) 1978, 1980, 1982, 1984 BY                                  *
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0000    23  ;*  SOFTWARE ON EQUIPMENT WHICH IS NOT SUPPLIED BY DIGITAL.                  *
0000    24  ;*                                                                           *
0000    25  ;*                                                                           *
0000    26  ;*****************************************************************************
0000    27  ;
0000    28
0000    29  ;++
0000    30  ; FACILITY: DECNET HOST LOADER (HLD)
0000    31  ;
0000    32  ; ABSTRACT:
0000    33  ;
0000    34  ;       HLD IS A COMPONENT OF DECNET-VAX. IT PROVIDES ACCESS TO
0000    35  ;       RSX11S TASK IMAGES STORED ON A VAX/VMS SYSTEM.
0000    36  ;
0000    37  ; ENVIRONMENT:
0000    38  ;
0000    39  ;       THE HLD IMAGE EXECUTES IN THE CONTEXT OF A PROCESS CREATED BY
0000    40  ;       NETACP. IT RUNS IN USER MODE AND REQUIRES NETWORK PRIVILEGE.
0000    41  ;
0000    42  ; AUTHOR: SCOTT G. DAVIS,       CREATION DATE: 11-MAY-79
0000    43  ;
0000    44  ; MODIFICATIONS:
0000    45  ;
0000    46  ;--
0000    47
0000    48  ;
0000    49  ; INCLUDE FILES:
0000    50  ;
0000    51  ;
0000    52  ; MACROS:
0000    53  ;
0000    54  ;       NONE
0000    55  ;
00000000    56          .PSECT  HLD$PURE        NOSHR,NOEXE,RD,NOWRT,LONG
0000    57  ;
```

```
                        0000     58 ; EQUATED SYMBOLS:
                        0000     59 ;
                00000200 0000    60 HLD_DISK_SIZE = 512                  ;
                        0000     61
                00000000 0000    62 HLD$T_TASK == 0                      ; OPDATA offset to task name
                00000000 0000    63 HLD$W_XFR_SIZE == 0                  ; OPTDATA offset to transfer size
                00000002 0000    64 HLD$B_NLUNS == 2                     ; OPTDATA offset to number of luns to fix
                00000004 0000    65 HLD$W_PART_ADDR == 4                 ; OPDATA OFFSET TO PARTITION ADDRESS
                00000006 0000    66 HLD$W_PART_SIZE == 6                 ; OPDATA OFFSET TO PARTITION SIZE
                0000000B 0000    67 HLD$B_LUN_FLAG == 8                  ; OPDATA OFFSET TO LUN-FIXING FLAG
                00000009 0000    68 HLD$B_REQUEST == 9                   ; OPDATA OFFSET TO REQUEST TYPE
                0000000A 0000    69 HLD$L_OVL_VBN == 10                  ; OVERLAY REQUEST VBN
                        0000     70 ;
                        0000     71 ; GLOBAL STORAGE:
                        0000     72 ;
                        0000     73 ; DEVICE NAME AND LOGICAL NAME DESCRIPTOR BLOCKS WITH TEXT
                        0000     74 ;
                        0000     75
                        0000     76 HLD$GQ_LNKNAM::                      ; DEVICE NAME DESCRIPTOR BLOCK
   3A 54 45 4E 5F 00000008'010E0000' 0000 77        .ASCID  /_NET:/      ;  FOR THE LINK
                        000D     78 HLD$GQ_SYSNAM::                      ; LOGICAL NAME DESCRIPTOR BLOCK
45 4E 24 53 59 53 00000015'010E0000' 000D 79        .ASCID  /SYS$NET/    ;  FOR SYS$NET
                             54  001B
                        001C     80
                00000000 0000    81         .PSECT  HLD$IMPURE      NOSHR,NOEXE,RD,WRT,LONG
                        0000     82
                00000008 0000    83 HLD$GQ_NCBDESC::         .BLKQ   1       ; NCB DESCRIPTOR
                00000048 0008    84 HLD$GT_NCBBUF:: .BLKB    64              ; NCB BUFFER
                0000004C 0048    85 HLD$GQ_NODEDESC::        .BLKL   1       ; NODE NAME DESCRIPTOR
                00000008' 004C   86                 .ADDRESS        HLD$GT_NCBBUF ; NODE IS IN BUFFER
                00000058 0050    87 HLD$GQ_LNKIOSB::         .BLKQ   1       ; LOGICAL LINK IOSB
                000000C8 0058    88 HLD$GQ_PRTBUF:: .LONG    200             ; PRINT BUFFER DESCRIPTOR
                000002D0' 005C   89         .ADDRESS        HLD_AB_PRTBUF
                00000062 0060    90 HLD$GW_LNKCHN:: .BLKW    1               ; LOGICAL LINK CHANNEL
                    0000' 0062   91 HLD$GW_IOFUNC:: .WORD    IO$_ACCESS      ; HOLDS I/O FUNCTION - START WITH CONFIRM
                    0000' 0064   92 HLD$GW_SAVEFUNC::           .WORD   IO$_WRITEVBLK ; HOLD NETWORK READ/WRITE FUNCTION
                        0066     93 HLD$GL_IOROUT_1::
                00000000' 0066   94         .ADDRESS        HLD$DISK_READ   ; ADDRESS OF I/O ROUTINE 1
                        006A     95 HLD$GL_IOROUT_2::
                00000000' 006A   96         .ADDRESS        HLD$NET_IO      ; ADDRESS OF I/O ROUTINE 2
                00000000 006E    97 HLD$GL_IOPARAM1::        .LONG   0       ; HOLDS I/O P1
                00000076 0072    98 HLD$GL_IOPARAM2::        .BLKL   1       ; HOLDS I/O P2
                0000007A 0076    99 HLD$GT_OPER::    .BLKA   1               ; HOLDS ADDRESS OF REQUEST TYPE
                0000007C 007A   100 HLD$GW_PRTLEN:: .BLKW   1               ; LENGTH OF PRINT BUFFER
                    0200 007C   101 HLD$GW_IOLEN::  .WORD   512             ; Length of non-overlay block transfer
                      00 007E   102 HLD$GB_ERRORFLG::           .BYTE   0       ; NUMBER OF ERROR MESSAGE, IF ANY
                      00 007F   103 HLD$GB_MAPFLAG::            .BYTE   0       ; TASK FLAG -   0=>MAP (DEFAULT)
                        0080    104                                             ;               1=>UNM
                      01 0080   105 HLD$GB_GPFLAG:: .BYTE   1               ; General purpose task flag - 1=>GP
                      00 0081   106 HLD$GB_LUNFLAG::            .BYTE   0       ; Lun-fixing flag
                      06 0082   107 HLD$AT_TSKBUF:: .BYTE   6               ; FIXED LENGTH OF TASK NAME
                00000089 0083   108                 .BLKB   6               ; FOR HOLDING COUNTED DECODED TASK NAME
                        0089    109
                        0089    110
                        0089    111         .ALIGN  LONG                    ; REQUIRED FOR FABS AND RABS
                        008C    112
                        008C    113 HLD$TSKFAB::                            ; FAB FOR TASK FILE
```

```
                     008C   114          $FAB    DNM=<.TSK> -                    ; DEFAULT FILE TYPE
                     008C   115                  FAC=<BIO,GET,PUT>               ; BLOCK I/O, READ, WRITE
                     00DC   116
                     00DC   117 HLD$TSKRAB::                                     ; RAB FOR TASK FILE
                     00DC   118          $RAB    FAB=HLD$TSKFAB -                ;
                     00DC   119                  BKT=1 -                         ; START WITH LABEL BLOCK
                     00DC   120                  ROP=BIO -                       ; BLOCK I/O
                     00DC   121                  UBF=HLD$AB_BUFFER -             ; BUFFER
                     00DC   122                  USZ=HLD_DISK_SIZE               ; BLOCK SIZE
                     0120   123
000000B8             0120   124 HLD$GL_TSKFNA == HLD$TSKFAB+FAB$L_FNA             ; FOR STUFFING FILESPEC ADDRESS
000000C0             0120   125 HLD$GB_TSKFNS == HLD$TSKFAB+FAB$B_FNS             ; FOR STUFFING FILESPEC SIZE
00000114             0120   126 HLD$GL_TSKBKT == HLD$TSKRAB+RAB$L_BKT             ; FOR STUFFING BLOCK NUMBER
                     0120   127
                     0120   128          .ALIGN  LONG
                     0120   129
                     0120   130 HLD$PRTFAB::                                     ; FILE ACCESS BLOCK
                     0120   131          $FAB    FAC=PUT-                        ;
                     0120   132                  RAT=CR-                         ;
                     0120   133                  FNM=<SYS$OUTPUT>                ;
                     0170   134 HLD$PRTRAB::                                     ; RECORD ACCESS BLOCK
                     0170   135          $RAB    FAB=HLD$PRTFAB-                 ;
                     0170   136                  RBF=HLD_AB_PRTBUF-              ;
                     0170   137                  RSZ=0                           ; T.B.S. DYNAMICALLY
                     01B4   138
                     01B4   139          .ALIGN  LONG
                     01B4   140
                     01B4   141 HLD$DATFAB::                                     ; FAB FOR TASK HLD.DAT TASK FILE
                     01B4   142          $FAB    FAC=GET -                       ;
                     01B4   143                  FNM=<SYS$SYSTEM:HLD.DAT> - ;
                     01B4   144                  FOP=SQO                         ;
                     0204   145
                     0204   146 HLD$DATRAB::                                     ; RAB FOR HLD.DAT
                     0204   147          $RAB    FAB=HLD$DATFAB -                ;
                     0204   148                  UBF=HLD_AB_NAMEBUF -            ;
                     0204   149                  USZ=200                         ;
                     0248   150
00000226             0248   151 HLD$GW_DATRSZ == HLD$DATRAB+RAB$W_RSZ             ; ADDRESS OF RECORD LENGTH
0000022C             0248   152 HLD$GL_DATRBF == HLD$DATRAB+RAB$L_RBF             ; ADDRESS OF RECORD POINTER
0000024C             0248   153 HLD$GL_RECEND:: .BLKL   1                        ; POINTER BEYOND END OF RECORD
                     024C   154
000002D0             024C   155 HLD_AB_NAMEBUF: .BLKB   132                      ; FOR MATCHING TASK NAME, ETC.
                     02D0   156 HLD_AB_PRTBUF:                                   ; PRINT BUFFER
00000398             02D0   157          .BLKB   200                             ; SAVE SOME SPACE
00000598             0398   158 HLD$AB_BUFFER:: .BLKB   HLD_DISK_SIZE           ; I/O BUFFER
                     0598   159
                     0598   160          .END
```

Symbol table

```
$$.TAB                          = 00000204 R      02
$$.TABEND                       = 00000248 R      02
$$.TMP                          = 00000000
$$.TMPX                         = 0000000E R      04
$$.TMPX1                        = 00000012
FAB$B_DNS                       = 00000035
FAB$B_FNS                       = 00000034
FAB$C_BID                       = 00000003
FAB$C_BLN                       = 00000050
FAB$C_SEQ                       = 00000000
FAB$C_VAR                       = 00000002
FAB$L_ALQ                       = 00000010
FAB$L_DNA                       = 00000030
FAB$L_FNA                       = 0000002C
FAB$L_FOP                       = 00000004
FAB$V_BIO                       = 00000005
FAB$V_CHAN_MODE                 = 00000002
FAB$V_CR                        = 00000001
FAB$V_FILE_MODE                 = 00000004
FAB$V_GET                       = 00000001
FAB$V_LNM_MODE                  = 00000000
FAB$V_PUT                       = 00000000
FAB$V_SQO                       = 00000006
FAB$W_GBC                       = 00000048
HLD$AB_BUFFER                     00000398 RG     02
HLD$AT_TSKBUF                     00000082 RG     02
HLD$B_CUN_FLAG                  = 00000008  G
HLD$B_NLUNS                     = 00000002  G
HLD$B_REQUEST                   = 00000009  G
HLD$DATFAB                        000001B4 RG     02
HLD$DATRAB                        00000204 RG     02
HLD$DISK_READ                     ********   X    02
HLD$GB_ERRORFLG                   0000007E RG     02
HLD$GB_GPFLAG                     00000080 RG     02
HLD$GB_LUNFLAG                    00000081 RG     02
HLD$GB_MAPFLAG                    0000007F RG     02
HLD$GB_TSKFNS                   = 000000C0 RG     02
HLD$GL_DATRBF                   = 0000022C RG     02
HLD$GL_IOPARAM1                   0000006E RG     02
HLD$GL_IOPARAM2                   00000072 RG     02
HLD$GL_IOROUT_1                   00000066 RG     02
HLD$GL_IOROUT_2                   0000006A RG     02
HLD$GL_RECEND                     00000248 RG     02
HLD$GL_TSKBKT                   = 00000114 RG     02
HLD$GL_TSKFNA                   = 000000B8 RG     02
HLD$GQ_LNKIOSB                    00000050 RG     02
HLD$GQ_LNKNAM                     00000000 RG     01
HLD$GQ_NCBDESC                    00000000 RG     02
HLD$GQ_NODEDESC                   00000048 RG     02
HLD$GQ_PRTBUF                     00000058 RG     02
HLD$GQ_SYSNAM                     0000000D RG     01
HLD$GT_NCBBUF                     00000008 RG     02
HLD$GT_OPER                       00000076 RG     02
HLD$GW_DATRSZ                   = 00000226 RG     02
HLD$GW_IOFUNC                     00000062 RG     02
HLD$GW_IOLEN                      0000007C RG     02
HLD$GW_LNKCHN                     00000060 RG     02
HLD$GW_PRTLEN                     0000007A RG     02
HLD$GW_SAVEFUNC                   00000064 RG     02
HLD$L_OVL_VBN                   = 0000000A  G
HLD$NET_IO                        ********   X    02
HLD$PRTFAB                        00000120 RG     02
HLD$PRTRAB                        00000170 RG     02
HLD$TSKFAB                        0000008C RG     02
HLD$TSKRAB                        000000DC RG     02
HLD$T_TASK                      = 00000000  G
HLD$W_PART_ADDR                 = 00000004  G
HLD$W_PART_SIZE                 = 00000006  G
HLD$W_XFR_SIZE                  = 00000000  G
HLD_AB_NAMEBUF                    0000024C R      02
HLD_AB_PRTBUF                     000002D0 R      02
HLD_DISK_SIZE                   = 00000200
IO$_ACCESS                        ********   X    02
IO$_WRITEVBLK                     ********   X    02
RAB$B_RAC                       = 0000001E
RAB$C_BID                       = 00000001
RAB$C_BLN                       = 00000044
RAB$C_SEQ                       = 00000000
RAB$L_BKT                       = 00000038
RAB$L_CTX                       = 00000018
RAB$L_RBF                       = 00000028
RAB$L_ROP                       = 00000004
RAB$V_BIO                       = 0000000B
RAB$W_RSZ                       = 00000022
```

Psect synopsis

PSECT name	Allocation	PSECT No.	Attributes
. ABS .	00000000 (0.)	00 (0.)	NOPIC USR CON ABS LCL NOSHR NOEXE NORD NOWRT NOVEC BYTE
HLD$PURE	0000001C (28.)	01 (1.)	NOPIC USR CON REL LCL NOSHR NOEXE RD NOWRT NOVEC LONG
HLD$IMPURE	00000598 (1432.)	02 (2.)	NOPIC USR CON REL LCL NOSHR NOEXE RD WRT NOVEC LONG
ABS	00000000 (0.)	03 (3.)	NOPIC USR CON ABS LCL NOSHR EXE RD WRT NOVEC BYTE
$RMSNAM	00000020 (32.)	04 (4.)	NOPIC USR CON REL LCL NOSHR EXE RD WRT NOVEC BYTE

Performance indicators

Phase	Page faults	CPU Time	Elapsed Time
Initialization	35	00:00:00.08	00:00:01.23
Command processing	132	00:00:00.60	00:00:03.67
Pass 1	193	00:00:04.66	00:00:14.55
Symbol table sort	0	00:00:00.37	00:00:00.64
Pass 2	55	00:00:00.89	00:00:03.30
Symbol table output	12	00:00:00.08	00:00:00.20
Psect synopsis output	4	00:00:00.03	00:00:00.05
Cross-reference output	0	00:00:00.00	00:00:00.00
Assembler run totals	434	00:00:06.71	00:00:23.74

The working set limit was 900 pages.
20804 bytes (41 pages) of virtual memory were used to buffer the intermediate code.
There were 20 pages of symbol table space allocated to hold 354 non-local and 0 local symbols.
160 source lines were read in Pass 1, producing 20 object records in Pass 2.
17 pages of virtual memory were used to define 12 macros.

Macro library statistics

Macro library name	Macros defined
_255DUA28:[HLD.OBJ]HLD.MLB;1	0
_255DUA28:[SYSLIB]STARLET.MLB;2	9
TOTALS (all libraries)	9

499 GETS were required to define 9 macros.

There were no errors, warnings or information messages.

MACRO/LIS=LIS$:HLDDATA/OBJ=OBJ$:HLDDATA MSRC$:HLDDATA/UPDATE=(ENH$:HLDDATA)+LIB$:HLD/LIB

0186 AH-BT13A-SE
VAX/VMS V4.0

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